

ABSTRACT OF THE DISCLOSURE

The present invention describes a network planning mechanism for the optimisation of system quality associated with frequency reuse for a mobile network infrastructure and business access applications, by using an intelligent combination of microwave point-to-point and point-to-multipoint links in Broadband Wireless Access Systems or LMDS, for example. In an embodiment of the invention, Radio Base Stations (RBSs) sites can be connected to the Switch site by a combination of fibre optics, leased lines, or preferably microwave radio links. The embodiment enables traffic from several end sites to be concentrated at selected hub sites (hub site 1-4). The system is optimised by minimizing the quality degradation that can be experienced due to excessive interference inside a certain portion of the point-to-multipoint covered sector by means of the combined point-to-multipoint and point-to point solutions. The RBS, which on the planning phase will experience excessive interference in the direction to the hub, is not directly connected the point-to-multipoint hub, but through a point-to-point link connecting to an access terminal, co-located with a different RBS or business user, in line of sight with the previous one. The access terminal in turn connects the point-to-multipoint hub allowing a frequency reuse factor of one to be deployed.